

BEFORE THE  
PUBLIC SERVICE COMMISSION  
OF SOUTH CAROLINA

Application of Duke Energy Carolinas, LLC  
for Approval of Energy Efficiency Plan Including an  
Energy Efficiency Rider and Portfolio of Energy  
Efficiency Programs

## COVER SHEET

DOCKET  
NUMBER: 2007-358-E

(Please type or print)

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## DOCKETING INFORMATION (Check all that apply)

☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other: \_\_\_\_\_

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)			
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request	
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certificatio	
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigator	
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement	
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment	
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter	
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response	
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery	
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition	
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation	
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena	
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff	
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input checked="" type="checkbox"/> Other: Rebuttal Testimony:	
			Richard G. Stevie	
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest		
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit		
	<input type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report		

BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2007-358-E

In re:	)	
Application of Duke Energy Carolinas, LLC	)	<b>REBUTTAL TESTIMONY OF</b>
For Approval of Energy Efficiency Plan	)	<b>RICHARD G. STEVIE, PhD. FOR</b>
Including an Energy Efficiency Rider and	)	<b>DUKE ENERGY CAROLINAS</b>
Portfolio of Energy Efficiency Programs	)	
	)	

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WITH THE EXCEPTION OF THE FORM OF THE  
SIGNATURE, OF THE E-FILED COPY SUBMITTED  
TO THE COMMISSION IN ACCORDANCE WITH ITS  
ELECTRONIC FILING INSTRUCTIONS.***

1   **Q.     PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH**  
2   **DUKE ENERGY CORPORATION.**

3   A.    My name is Richard G. Stevie. My business address is 139 E. Fourth St.,  
4        Cincinnati, Ohio. I am Managing Director of Customer Market Analytics for  
5        Duke Energy Shared Services, Inc. ("Duke Energy Shared Services"), a wholly-  
6        owned service company subsidiary of Duke Energy Corporation ("Duke  
7        Energy").

8   **Q.     HAVE YOU PREVIOUSLY FILED DIRECT TESTIMONY IN SUPPORT**  
9   **OF DUKE ENERGY CAROLINAS' APPLICATION IN THIS DOCKET?**

10  A.    Yes, I have.

11  **Q.     WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**  
12  **PROCEEDING?**

13  A.    The purpose of my rebuttal testimony is to respond to several criticisms  
14        contained in the testimony of Southern Environmental Law Center ("SELC"),  
15        Southern Alliance for Clean Energy ("SACE"), Coastal Conservation League  
16        ("CCL"), and Environmental Defense ("ED") (collectively, "SELC") Witness  
17        Gilligan concerning Duke Energy Carolinas' energy efficiency programs and  
18        program development and Witness Knapp on the calculation of the cost per kWh  
19        of the Company's proposed program. Specifically, I will refute Mr. Gilligan's  
20        assertions that (1) Duke Energy Carolinas has not fully disclosed its program  
21        information, including cost-effectiveness and program impact analyses; (2) Duke  
22        Energy Indiana's energy efficiency programs were among the least productive  
23        and most expensive of those surveyed by Summit Blue; and (3) the Company's

24        Application proposes to achieve less energy efficiency than that identified by the

1 Company's Market Potential Study. Also, I will correct Mr. Knapp's calculation  
2 of the revenues per kWh associated with the Company's filing and his assertion  
3 that the revenue charge is too high.

4 **Q. HOW DO YOU RESPOND TO MR. GILLIGAN'S ASSERTION THAT**  
5 **THE COMPANY HAS NOT DISCLOSED PROGRAM INFORMATION,**  
6 **INCLUDING COST-EFFECTIVENESS ANALYSES AND IMPACT**  
7 **ANALYSES?**

8 A. Quite frankly, I am surprised at this assertion. The Company has provided  
9 extensive information in response to very detailed data requests from SELC. In  
10 addition, information on the proposed programs was made public in the Duke  
11 Energy Carolinas Annual Plan, which was filed with the Commission on  
12 November 15, 2007.

13 Let me be more specific. In response to SELC's data requests, the  
14 Company provided over 450 megabytes of information in electronic format. This  
15 information included:

- 16 • Cost-effectiveness results on each of the 120
- 17 commercial/industrial measures included in the proposed
- 18 commercial/industrial programs
- 19 • Cost-effectiveness results on each of the measures/ programs for
- 20 the residential sector
- 21 • Projected load impacts, kW and kWh, for each measure
- 22 • Projected program costs
- 23 • Projected revenues to the Company for each measure

- Summary files that provided aggregated information on projected load impacts, revenues, and costs at the program level so that SELC would not have to spend time looking at each of the measure level files to add up the numbers to a program level

It may be argued that the information provided in response to the data requests was designated confidential and not made public. However, the responses to the data requests contained extensive data on avoided costs. Information on the cost-effectiveness as well as other details of each program was made public by the Company in the Duke Energy Carolinas 2007 Annual Plan, on pages 101 to 114 of the report.

Based on my review of what was provided, I completely disagree with Mr. Gilligan's assertion that the Company has not provided adequate information to evaluate the Company's proposed programs.

**Q. HOW DO YOU RESPOND TO MR. GILLIGAN'S ASSERTION THAT DUKE ENERGY INDIANA'S ENERGY EFFICIENCY PROGRAMS ARE AMONG THE LEAST PRODUCTIVE AND MOST EXPENSIVE?**

A. While Mr. Gilligan may have obtained a report that attempts to survey the cost-effectiveness and operation of energy efficiency programs, it is clear that Mr. Gilligan must have no familiarity with or knowledge of Duke Energy Indiana's energy efficiency programs. Otherwise, he would not make this assertion.

First, the information provided in the testimony by Mr. Gilligan, represents only two pages from a presentation. The rest of the presentation is not provided. In addition, there is no transcript of the presentation to explain the

1 chart. No one can glean from the table what exactly was said about the chart or  
2 what conditions might have been applied to the results.

3 Second, the chart refers to commercial and industrial DSM programs and  
4 does not cover residential programs.

5 Third, no mention is made of the fact that Duke Energy Indiana energy  
6 efficiency programs are restricted to customers with usage below 500 kW as a  
7 result of a settlement agreement with larger non-residential customers.

8 Fourth, Duke Energy efficiency programs reviewed on the chart do not  
9 include any of the Company's demand response programs. That is why the peak  
10 impacts reported are so small. Yet, demand response programs are included for  
11 other companies reported. This clearly creates an apples and oranges  
12 comparison.

13 Fifth, it is not clear whether the calculation of costs per kWh and per kW  
14 consider the life of the measures or not. If some utilities include the savings over  
15 the life of the measure and others do not, the results are not comparable.

16 The Summit Blue study does not adjust for any of these anomalies. Based  
17 upon my review of the limited information provided, the chart provided in Mr.  
18 Gilligan's testimony cannot be used to make any comparative conclusions about  
19 the level of productivity or level of expense of different companies' programs.

20 **Q. HOW DO YOU RESPOND TO MR. GILLIGAN'S ASSERTION THAT**  
21 **THE COMPANY'S APPLICATION ACHIEVES LESS ENERGY**  
22 **EFFICIENCY THAN THAT IDENTIFIED BY THE COMPANY'S**  
23 **MARKET POTENTIAL STUDY?**

1     A.     On page 11 of Mr. Gilligan's testimony, he states that the Duke Energy Carolinas  
2     DSM Action Plan: South Carolina Draft Report provides an estimate of 3.6  
3     million mWh in annual economic energy savings available in South Carolina.  
4     He apparently references page 30 of the report as represented in the footnote in  
5     his testimony. He seems to conclude that 3.6 million mWh is the level of  
6     economic potential for energy efficiency in South Carolina as represented by the  
7     report.

8             Unfortunately, on the page referenced, there is no mention of an economic  
9     potential of 3.6 million mWh. Mr. Gilligan would have been better served to  
10    refer to Table 1 on page 1 of the report that states the economic potential is 4,116  
11    million kWh (4.1 million mWh). There, he might have also noticed that this was  
12    the estimated potential by the year 2026. In addition, he would have seen that the  
13    level recommended after five years was 300 million kWh or 0.3 million mWh.  
14    On page 2 of the report, in Table 2, the recommended level by the fourth year of  
15    the programs is 212 million kWh or 0.212 million mWh. The value 212 million  
16    kWh matches precisely the number on page 10 of my original pre-filed  
17    testimony. This level of load impact compares relatively well with the 192  
18    million kWh projected from the Company's proposed programs by the fourth  
19    year. These projected impacts were provided to SELC in the Company's  
20    responses to their data requests on January 8, 2008.

21            One other point should be emphasized. At the time the Company was  
22    preparing its application for implementation of new energy efficiency programs,  
23    it did not have the benefit of the market potential study. This issue was discussed

1 with the DSM Collaborative. At that time, the DSM Collaborative recommended  
2 that the Company proceed with the programs that were discussed and developed  
3 within the Collaborative. Then, once the market potential study was completed,  
4 the Company would come back and expand the offering and pick up any other  
5 recommended ideas. As it turns out, the Company's proposal did very well at  
6 capturing most of the potential programs recommended by the market potential  
7 study. On page 9 of my pre-filed testimony, I provided a comparison between  
8 the Company's proposed programs and the set recommended by the market  
9 potential study. This shows that there were only a couple areas that were not  
10 covered by the Company's proposed set of programs.

11 Given my review, I believe Mr. Gilligan's assertion that the Company has  
12 seriously underestimated the amount of available energy efficiency is  
13 inappropriate. Rather, I believe Mr. Gilligan has misinterpreted the results from  
14 the market potential study.

15 **Q. HOW DO YOU RESPOND TO MR. KNAPP'S ASSERTION THAT THE**  
16 **CHARGE PER KWH IS 22 CENTS OR MORE?**

17 **A.** On his Exhibit A, Mr. Knapp has unfortunately created a calculation that ignores  
18 two very important facts. First, the revenues associated with the Company's  
19 Application cover both conservation and demand response programs. In the  
20 Company's filing, there are no kWh savings associated with the demand response  
21 programs. To obtain a proper estimate of the revenue per kWh saved, one should  
22 only be using the revenues associated with the conservation programs. Because  
23 the revenues associated with the demand response programs represent the



1 majority of the charges, one should expect to see a high number in the way Mr.  
2 Knapp has calculated. Unfortunately, it is incorrect and misleading. And  
3 second, Mr. Knapp has mistakenly taken current year revenues and divided by  
4 current year kWh savings. This ignores the fact that the impacts from the  
5 conservation programs extend over several years, some as much as fifteen years.  
6 Analogously, it would be similar to calculating the total capital and operating  
7 cost per mile from a new car by only looking at the mileage covered in the first  
8 year, but including the total cost. Instead, one needs to look at the revenues and  
9 kWh over the life of the measures. Once one corrects for both of these issues, the  
10 revenue charge per kWh saved for the conservation programs is 5.2 cents per  
11 kWh,

12 Finally, it is important to note that the savings reported on his Exhibit A  
13 for the total Carolinas is inconsistent with what he reports for South Carolina.  
14 He reports incremental load savings for the Carolinas, but cumulative savings for  
15 South Carolina.

16 **Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL**  
17 **TESTIMONY?**

18 **A. Yes.**